

*Postscript.*

I have received the two following measures by letter from Mr. Burnham, too late for insertion in the body of my paper.

 $\beta$  *Andromedæ*. *Cycle*, No. 43.

	A-B		
	°	"	
Sm.	299.0	225.0	1839.5
Bu.	293.6	297.9	1878.9 (single distance)

 $\delta$  *Persei*. *Cycle*, No. 135.

	A-B		
	°	"	
Sm.	315.0	140.0	1833.7
Bu.	313.3	108.62	1878.9

I do not know of any other measures. Mr. Burnham's are made with the magnificent Dearborn refractor of  $18\frac{1}{2}$  inches aperture.

Clapham,  
1878, December 18.

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*Note on some hitherto Unnoticed Features near the Lunar Crater Hyginus.* By Lord Lindsay and Dr. R. Copeland.

It may be as well to preface the following note by the statement that it is not the intention of the writers to prove or disprove the existence of active volcanic agency in the Moon at the present moment. The sole object in view is to place on record certain not uninteresting observations confirming the well-known fact that the neighbourhood of the lunar crater *Hyginus* is full of complicated shallow irregularities and strongly marked differences of tone, which tend together to produce great apparent changes of surface configuration with change of illumination, and further to show that there exist striking features in the immediate neighbourhood which have hitherto escaped clear detection, but of which some traces may be found in the comparatively old map of Lohrmann.

During the night of October 17, 1878, the terminator passed over *Hyginus*. The whole night was fine, and the definition good, at times exceptionally so.

Under these circumstances the configurations of the region adjoining Schröter's well-known Rille were revealed in a very full degree. Six drawings were made between  $12^{\text{h}} 20^{\text{m}}$  and  $17^{\text{h}}$  G.M.T. Reserving for a future occasion a fuller discussion (based on micrometrical measures) of all these sketches, special attention is drawn to Nos. I, III, V, and VI.

Sketch No. I, which is a general representation of everything that is visible near *Hyginus*, exhibits no trace of a crater to the S.W. of *Hyginus*; but in No III, taken at  $15^{\text{h}} 15^{\text{m}}$ , a crescent-shaped ridge is shown abutting on that side of the crater.

At this time the observers were unable to interpret the meaning of this curved ridge; but by  $16^{\text{h}} 15^{\text{m}}$ , Sketch No. V,\* it had become obvious enough that the ridge formed part of the wall of a shallow but very regular crater, which may be called No. 29 (see key map), immediately S.W. of *Hyginus*. In the same direction there was also a second, somewhat smaller, though most obvious crater.

These two craters seem never to have been previously observed. The south-westernmost of them must have disappeared in the shadow of night almost immediately after it was first seen; for a sketch made at  $17^{\text{h}}$  (No. VI) shows no trace of it. The written observations also expressly confirm this fact.

On the other hand, its larger neighbour had become the most conspicuous object in the whole district: *Hyginus* being merged into the darkness of a large shallow depression to the N.E. that had been gradually making itself more and more obvious during the course of the night. On November 4, 1878, the region was examined under a moderately high illumination. It was then seen that the western end of a dark patch S. of *Hyginus* formed, and was coterminous towards the west with, the floor of No. 29; and, indeed, on November 8, one of us, in conjunction with Mr. G. J. Lohse, the Assistant Astronomer, saw most clearly that the western end of the above-mentioned shading was almost entirely, or perhaps completely, separated by a sort of strait from the main portion of the marking. This feature was again most clearly seen on December 10, at midnight. (Outline sketch).

This shaded patch seems to be visible under all except the very lowest illuminations, and is sufficiently well shown in Lohrmann, Sec. I., to convince us that it has, not greatly changed since his day. It is therefore highly improbable that Crater No. 29 has been formed since the date of Lohrmann's observations.† Yet the shading is not given by Schmidt or in the *Mappa Selenographica*. Possibly it may be shown in the large-scale map of this region by Mädler, which we have not had an opportunity of examining. It is given, however, in Dr Klein's Map, in *Sirius*, No. 8, 1878, but of a shape differing considerably from that in which we see it—Sketches of November 4 and December 10.

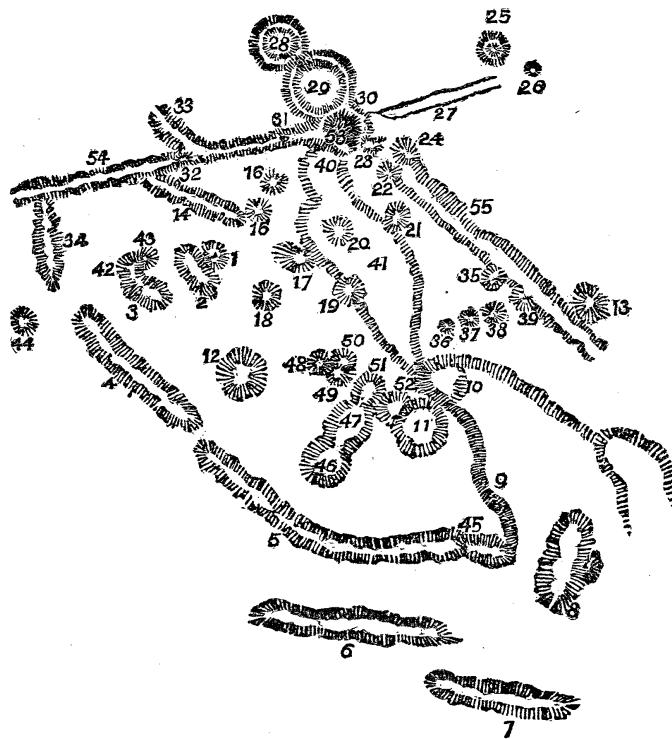
These facts show with what extreme caution all presumed evidence of change on the Moon's surface ought to be received, and how necessary it is to accumulate observations made under various, and particularly *low*, illuminations.

The observations were made with powers 307 and 442, on a refractor of 15·06 inches aperture.

*Dun Echt Observatory,  
1878, Dec. 11.*

\* Note to Sketch V. Finished about  $16^{\text{h}} 20^{\text{m}}$  G.M.T., at which time the shallow crater No. 29 was as black as *Hyginus*, and the peak No. 20 had disappeared.

† The *Topographie der sichtbaren Mondoberflächen*, Abt. I., containing Sections I.-IV., was published in 1824.

*Description.*

Reference No. to Key-map.	No. of Sketch in which the object is shown.						Remarks.
	I	II	III	IV	V	VI	
1							Seen as a crater in 1, 2, and 3.
2	I	II					
3	I	II					
4	I	II					
5-8	I						
9	I	II			V	VI	A deep valley.
10	I	II			V	VI	
11	I	II			V	VI	
12	I	II			V	VI	
13	I	II					And probably in V and VI.
14			III				A very low ridge.
15			III	IV	V		A small hill.
16			III	IV			A very low hill.
17			III	IV	V		A hill.
18			III		V		A low hill.
19			III	IV			A rise in edge of depression.
20	II		III	IV	V		A hill in a depression.
21			III	IV	V	VI	A hill on table-land.
22					V	VI	Elevation on edge of Rille.
23					V	VI	" "

11, 52, 51, 47, and 46 are portions of Mädler's *Hyginus* β.

25 is Mädler's *Hyginus* b.

The Rille, 27, was discovered by Lohrmann.